

## Making a Flag Pole

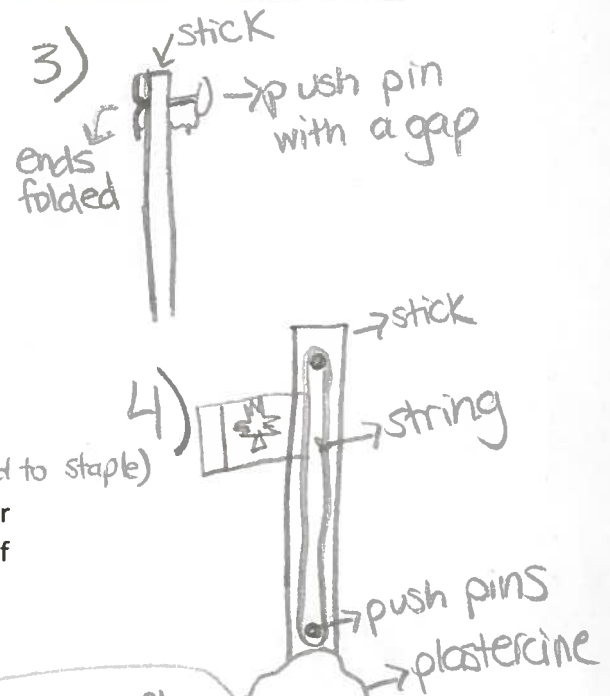
### Materials

- One flag to color per group member
- String
- 2 gold push pins
- 2 clear spools
- One paint stick with 2 holes in it
- A blob of plastercine
- One "evaluating your flagpole" worksheet per student.

### Steps:

#### Flag Pole 1: (Using Push Pins)

- 1) Each member can cut out and color one Canadian flag.  
(Note don't cut off the flap after the flag because you will need that part to wrap around string.)
- 2) Put the paint stick (pole) into a blob of plastercine so that it will stand on its own.
- 3) Push the 2 gold pins into the holes, but don't push them all the way against the wood. You need to leave a gap (about the size of your thumb nail) between the end of the pin and the wood so that string can move around that part. Fasten the gold pin to the back side of the wood by splitting open the 2 pieces of metal so that they hold the pins in place.
- 4) Wrap string around both pins so that it holds fairly tight but not too tight. Tie the string so that it creates a loop around the 2 pins. Attach one member's flag to the string (may need to staple)
- 5) See if you can get the flag to move up and down. Use another member's flag and new string to see if it makes a difference if the string is tighter or looser.
- 6) Fill out the top half of your "Evaluate the Flagpole" worksheet.



#### Flag Pole 2: (With Pulleys)

- 1) Remove the flag and string.
- 2) Remove the gold pins. Put a clear "pulley" wheel over the hole in the stick, and put the gold pins back in, making sure not to secure them too tight (the pulleys should be able to turn around on their axle).
- 3) Use the remaining team members' flags and string to see if the pulleys make a difference.
- 4) Record your changes and fill out the remainder of the "Evaluating the Flagpoles" worksheet.

